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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHEW, JOHN

ART UNIT PAPER NUMBER

2664

DATE MAILED: 12/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,816

Applicant(s)

VOGEL ET AL.

Examiner

John L Shew

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-5, 10-11, 24-26 and 32-34 is/are rejected.
- 7) ☐ Claim(s) 6-9, 12-23, 27-31 and 35-37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

Specification

Claim Objections

1. Claim 17 is objected to because of the following informalities: Claim is terminated twice with periods at two locations. Claim is indefinite. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, 10, 24-26, and 32-34 are rejected under 35 U.S.C. 102(a) as being anticipated by Bastiani et al. Bastiani teaches a serial bus (FIG. 2) used for communication between a pair of devices comprising of an ASP 104 and an ASP DEVICE 106. The communication between the devices uses a protocol transmission of a plurality of digital bits (FIG. 16) in a predetermined format (FIG. 20). The predetermined format comprising a frame cycle represented by the SYNC, PT BC and DT frames and a data cycle is represented by DATA frame. The inventor does not

disclose a pattern of bit generation to maintain a DC balance when formatting the digital bits. Hence there is no requirement for the bits to be formatted DC balanced.

3. Claim 2, Bastiani teaches a transmitting circuit and receiving circuit in the form of a transceiver circuit (FIG. 12). Voltage levels are used to determine HIGH and LOW states as shown by TABLE 18. Close proximity is shown by FIG. 12 wherein the transceivers are separated by 1.5 meter max. There is no discussion of DC balance. Hence no consideration for DC balance is implemented for this data transmission method.

4. Claim 3, Bastiani teaches the use of the same ground on the bus used by the transceiver devices (column 16 lines 9-16).

5. Claim 4, Bastiani teaches a framing cycle comprising a predetermined number of bits for control. FIG. 20 discloses the SYNC, PT, BC, DT as such a framing cycle using 7 bytes of bits. Further the framing cycle carries first control information bits represented by the 2 bytes of SYNC and the framing cycle carries leftover second control information represented by 5 bytes of PT, BC, and DT.

6. Claim 10, Bastiani teaches leftover control bits include error correction information PT and PT (bar) (FIG. 20) (column 2 lines 32-35).

7. Claim 24, Bastiani teaches a communications protocol for digital data transmission (FIG. 15) using frames (FIG. 20). It comprises a plurality of digital bits in a predetermined format structured into frames (FIG. 20). The predetermined format comprising a frame cycle represented by the SYNC, PT, BC and DT frames and a data cycle are represented by DATA frame. The frame cycle carries information relating to the protocol as specified by the PT, BC and DT frames. The data cycle carries information to be transmitted by the protocol in the DATA frame. The protocol is characterized by voltage levels of bits (TABLE 18) on successive frame cycles and data cycles as presented by the SYNC frame. The protocol makes no reference to limitation of run length in regards to the bit stream, thereby making no adjustments for DC balance.

8. Claim 25, Bastiani also teaches of frames (FIG. 20) SYNC, PT, BC and DT which is representative of a frame cycle. Further the delimiting frame bits are SYNC and the leftover bits for carrying control information for said frame are PT, BC, and DT.

9. Claim 26, Bastiani teaches leftover control bits include error correction information PT and PT (bar) (FIG. 20) (column 2 lines 32-35).

10. Claim 32, Bastiani teaches a method for transmission of a protocol for digital data (FIG. 15) using frames (FIG. 20). It comprises a plurality of digital bits in a predetermined format structured into frames (FIG. 20). The predetermined format

comprising a frame cycle represented by the SYNC, PT, BC and DT frames and a data cycle are represented by DATA frame. The frame cycle carries information relating to the protocol as specified by the PT, BC and DT frames. The data cycle carries information to be transmitted by the protocol in the DATA frame. The protocol is characterized by voltage HIGH and LOW levels for bits (TABLE 18). The protocol makes no reference to limitation of run length in regards to the bit stream, thereby making no adjustments for DC balance, implying an absence of DC balance.

11. Claim 33, Bastiani teaches the use of a serial bus between two devices (FIG. 2) for transmitting a communication protocol. The two devices are comprised of the an ASP 104 and the ASP 106a device. Further Bastiani teaches the connection of more than two devices (FIG. 4C), wherein an ASP 104 can connect to several ASP devices 106. These devices use said protocol (FIG. 20) to communicate with one another.

12. Claim 34, Bastiani teaches the use of fabricating said devices from electronic circuits (FIG. 14A) and said electronic circuits are in substantial close proximity to one another (FIG. 12) and sharing a common ground (column 16 lines 9-16).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bastiani as applied to claims 1, 2 and 3 above, and further in view of Derby et al. Bastiani does not teach framing cycle bits that alternate in value between HIGH and LOW between successive frames. Derby teaches a frame (FIG. 8) with a synchronization pattern alternating between HIGH and LOW (column 4 lines 63-66). It would have been obvious to one skilled in the art at the time of the invention to use an alternating HIGH and LOW pattern to synchronize a frame. This simplistic pattern greatly reduces the bandwidth required for synchronization purposes as taught by Derby (column 1 lines 61-67).

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bastiani as applied to claims 1, 2, 3, 4 and 10 above, and further in view of Bernath et al. Bastiani teaches a CRC field for error correction (FIG. 20). Bastiani teaches the use of a polynomial code for checksum error detection (column 27 lines 65-67, column 28 lines 36-41). Bastiani teaches the use of synchronous communication (column 24 lines 40-48). Bastiani does not teach the location of the error correction CRC field to be part of the leftover control bits, or equivalently the header section. Bernath teaches a CRC field 204 after the Frame Header 202 (FIGURE 2) which is used for control information (column 7 lines 38-42). This shows the CRC field is effectively part of the header section. It would have been obvious to one skilled in the art at the time of the invention to place the CRC field with the header section. This arrangement provides the CRC

value earlier to the circuitry, so it is immediately available for comparison once the calculation is performed (column 8 lines 13-27).

Allowable Subject Matter


15. Claims 6-9, 12-23, 27-31 and 35-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John L. Shew whose telephone number is 703-305-8708. The examiner can normally be reached on 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 703-305-4366. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

js



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